

No. 740,727.

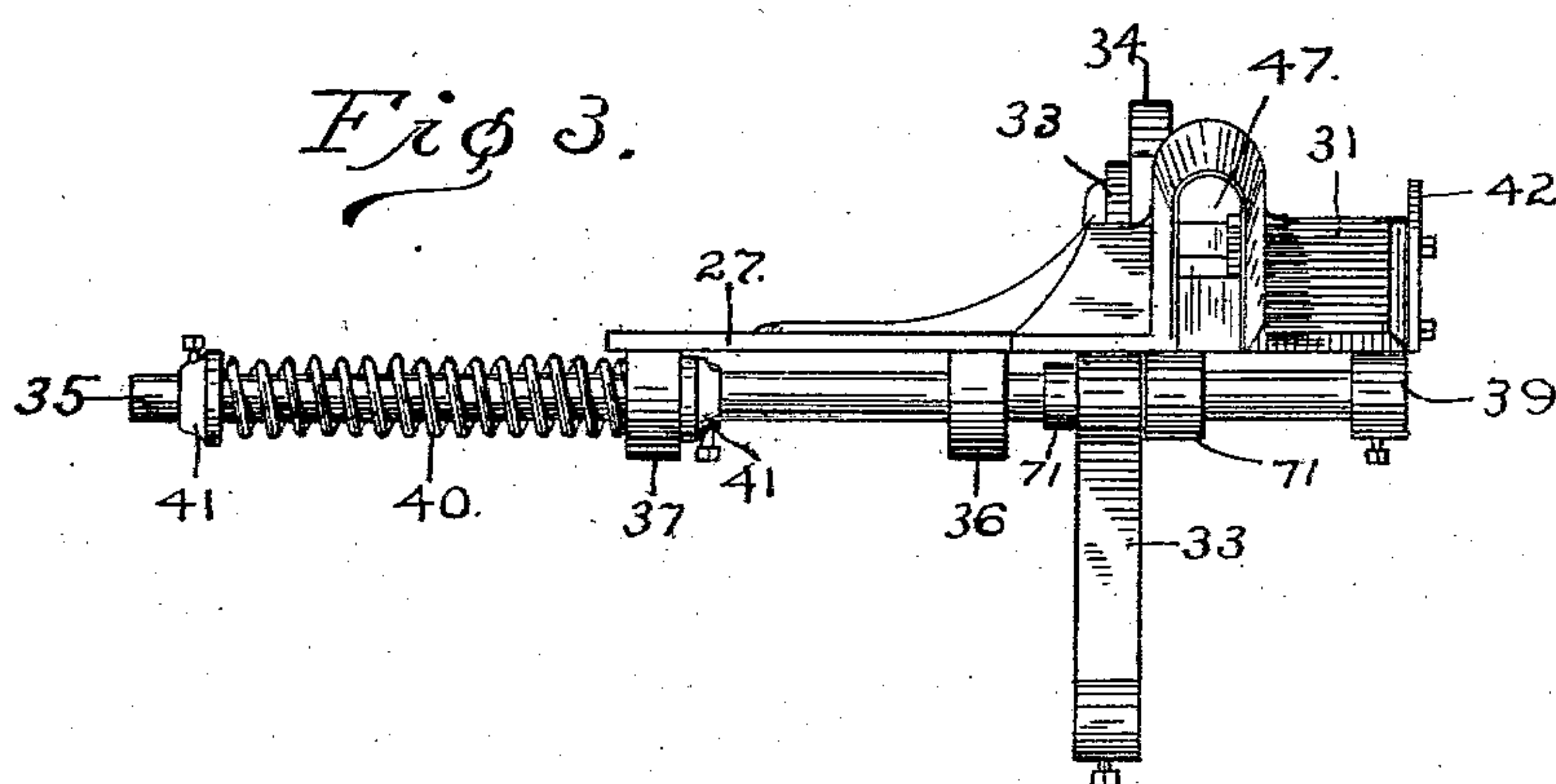
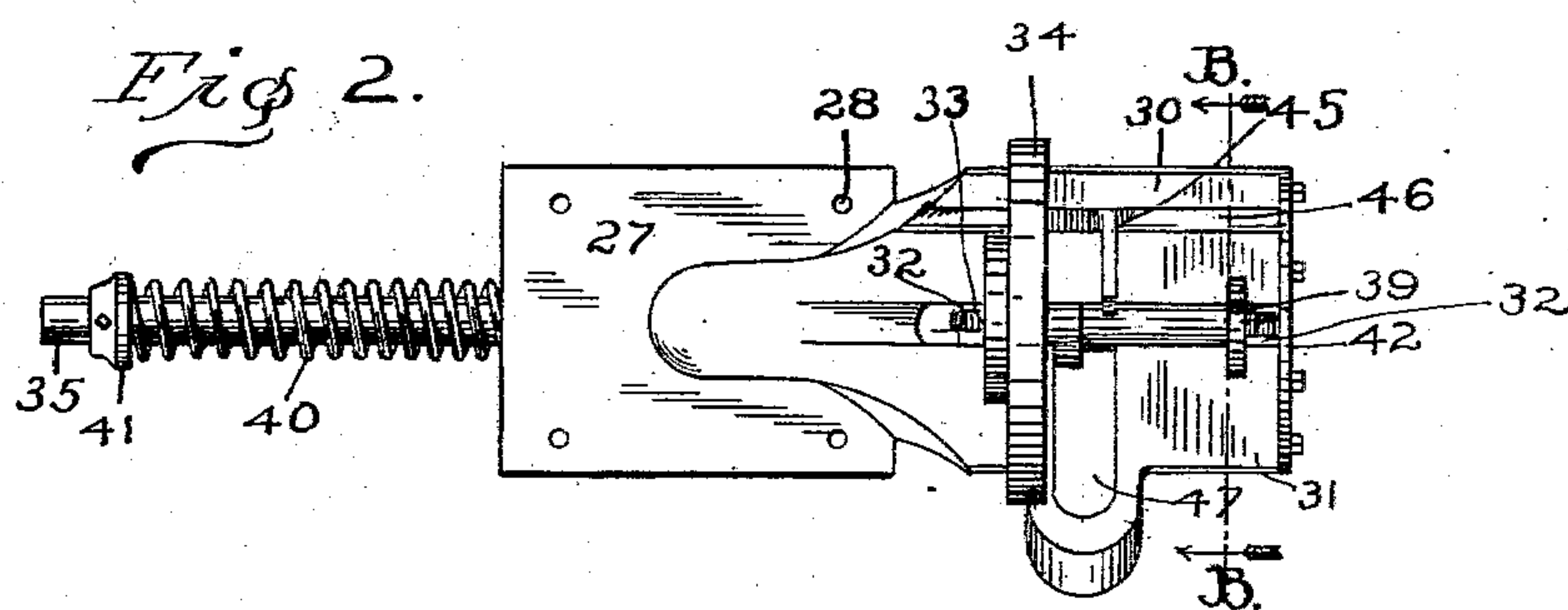
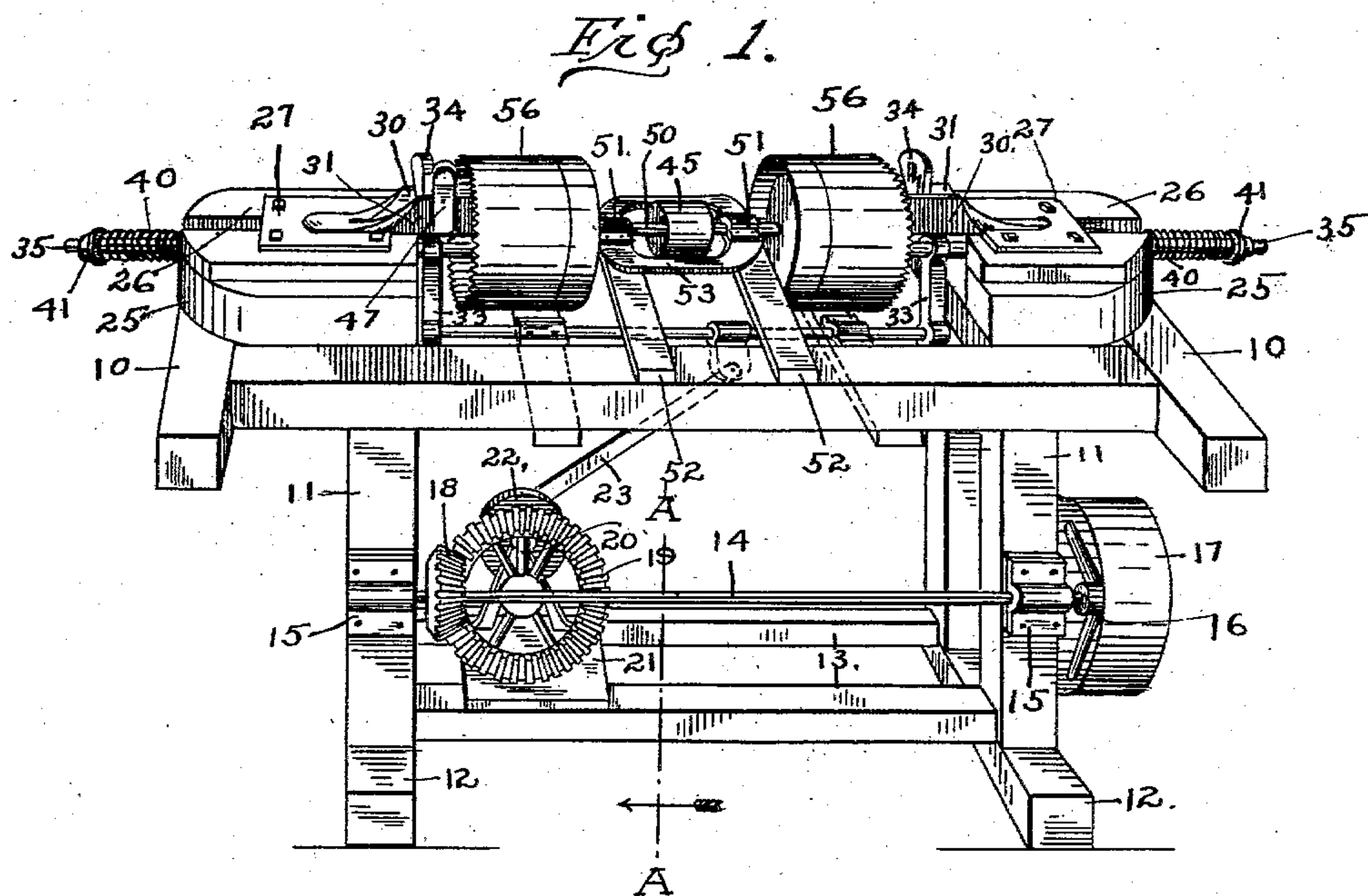
PATENTED OCT. 6, 1903.

G. F. WISSMAN.  
HEAD BLOCK SAWING MACHINE.

APPLICATION FILED OCT. 30, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES: Harry D. Pearce, George F. Wisman, INVENTOR.  
Arthur Burger, BY D. H. Lockwood, ATTORNEY.

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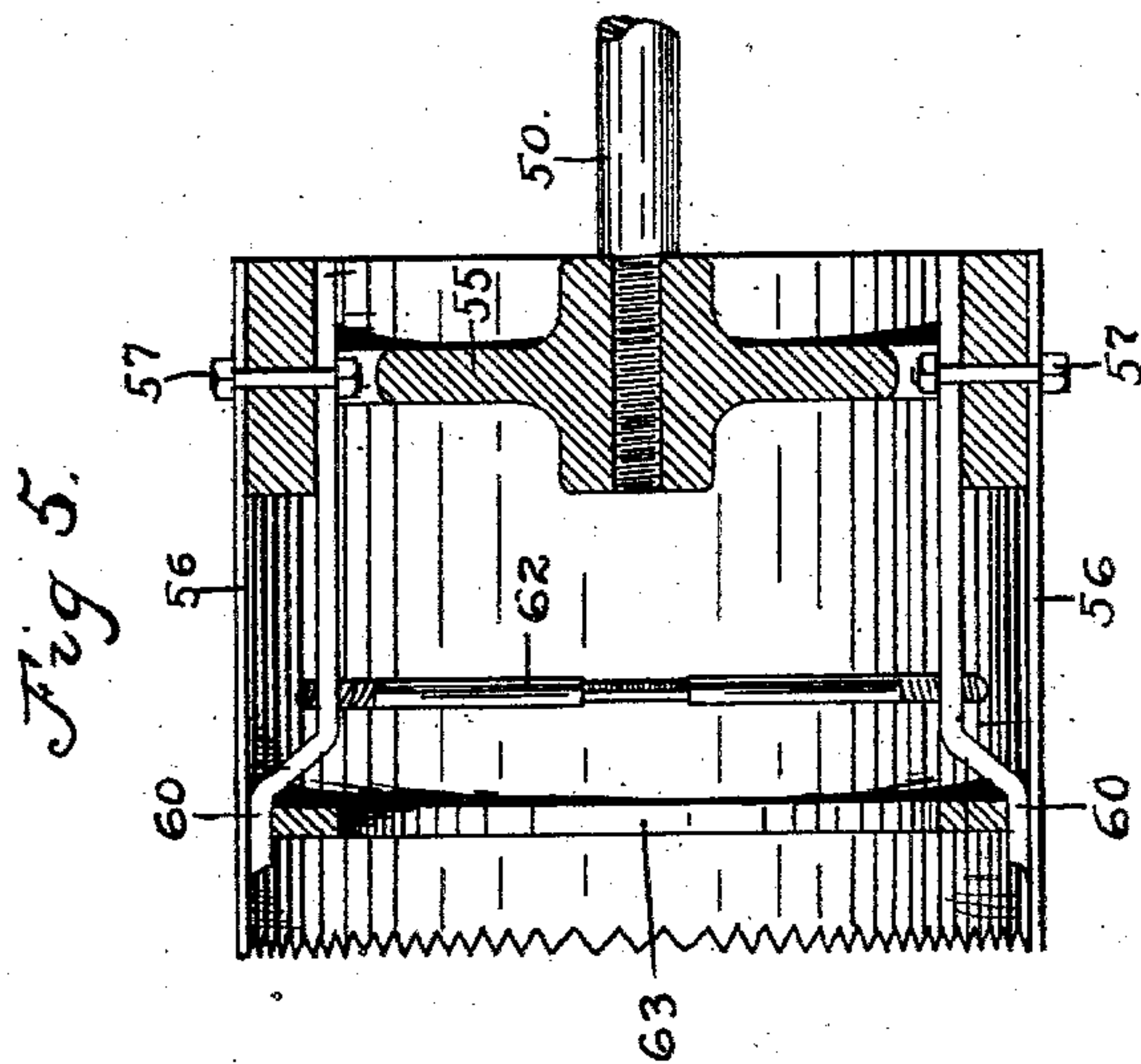
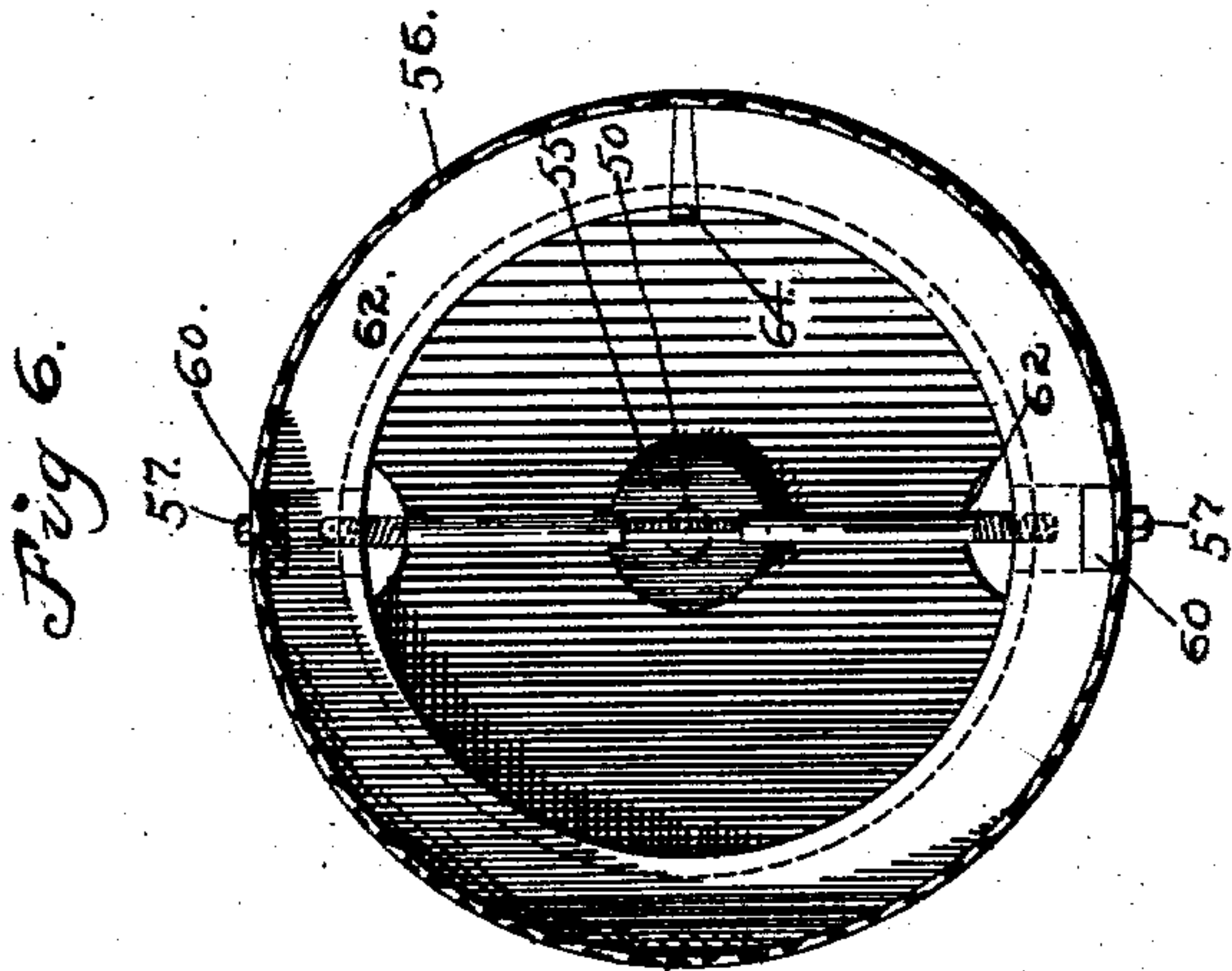
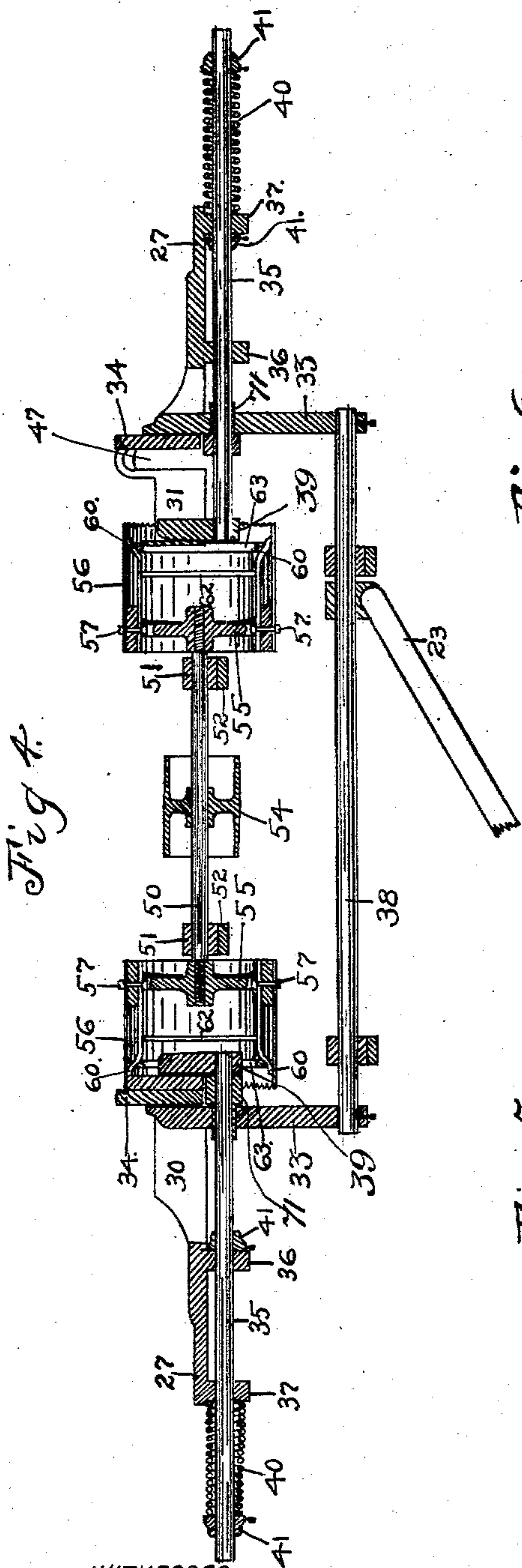
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig 7

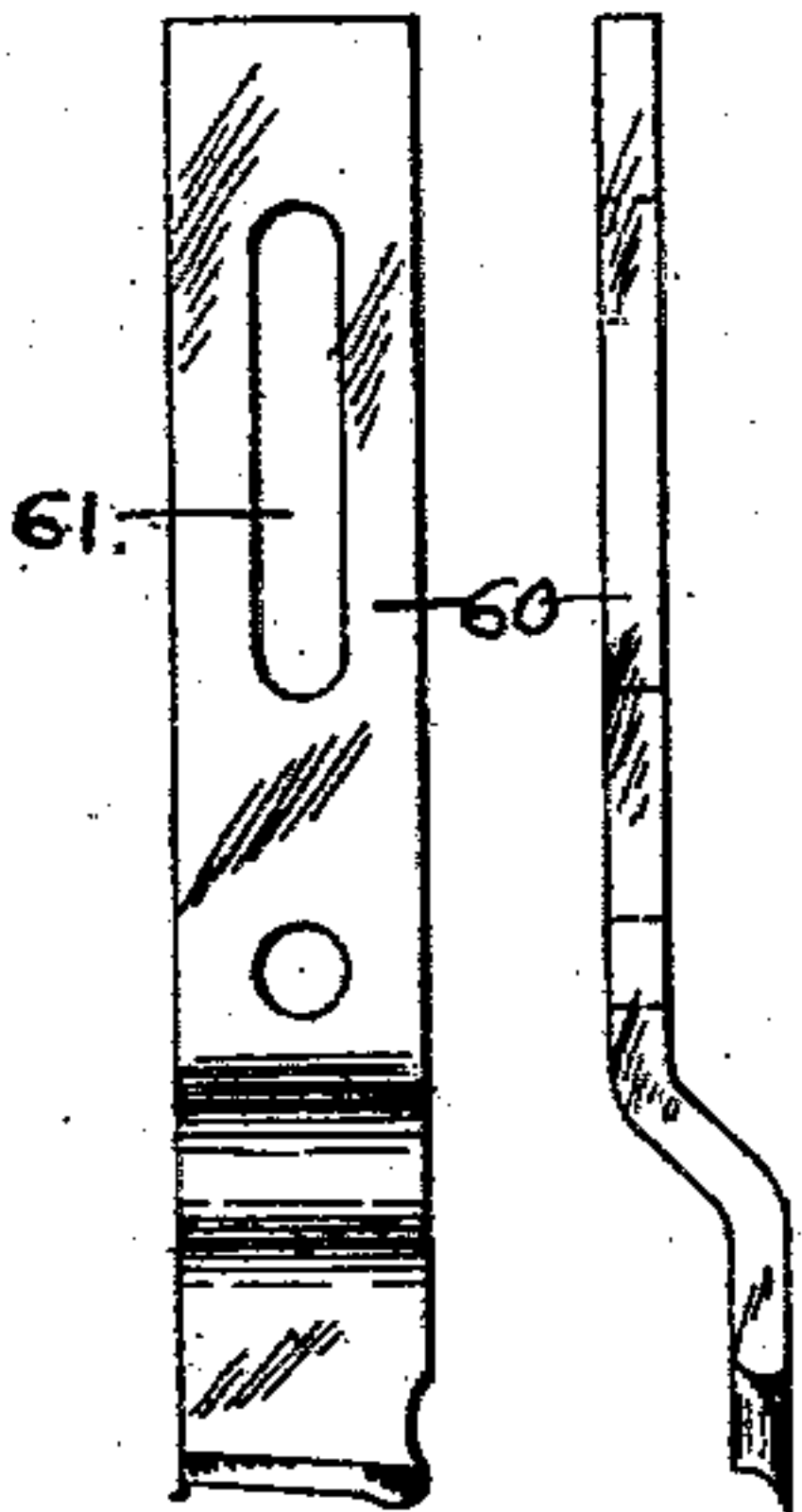


Fig 8.

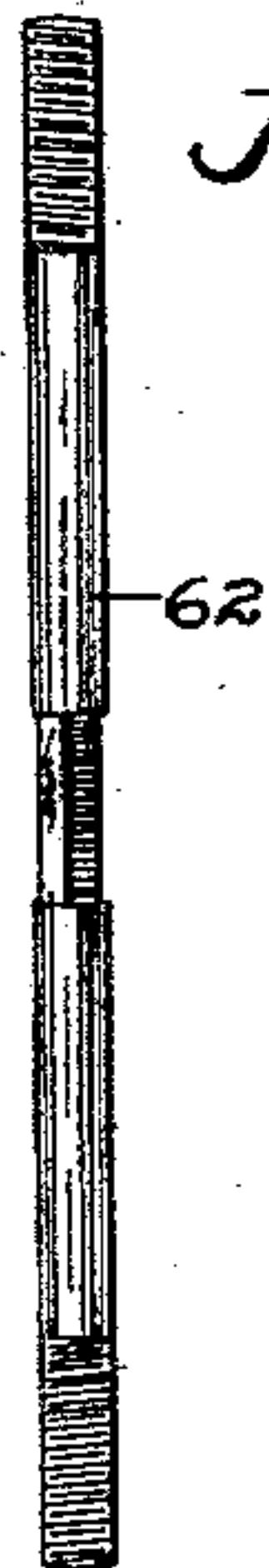


Fig 9.

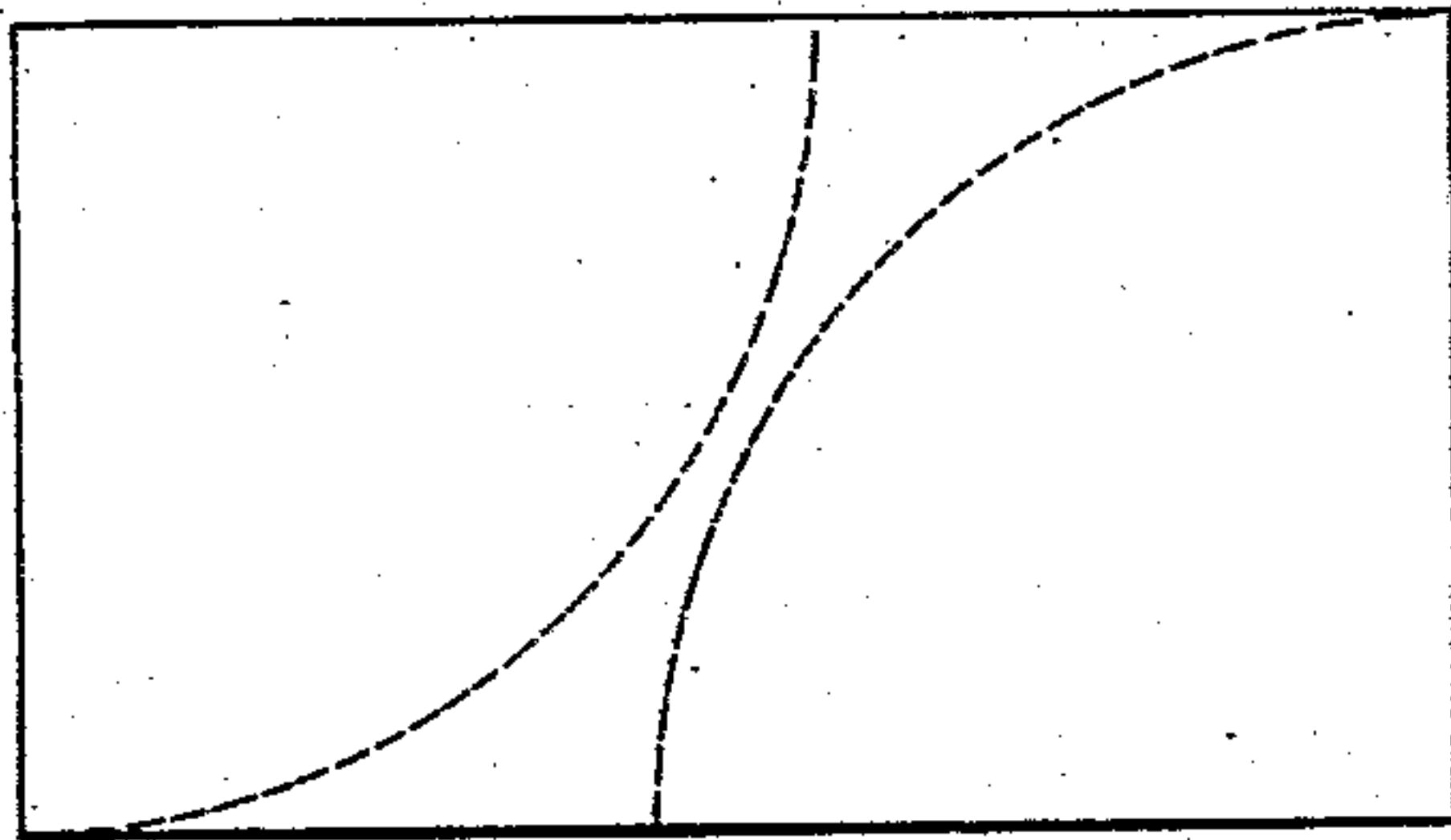


Fig 10.



Fig 11

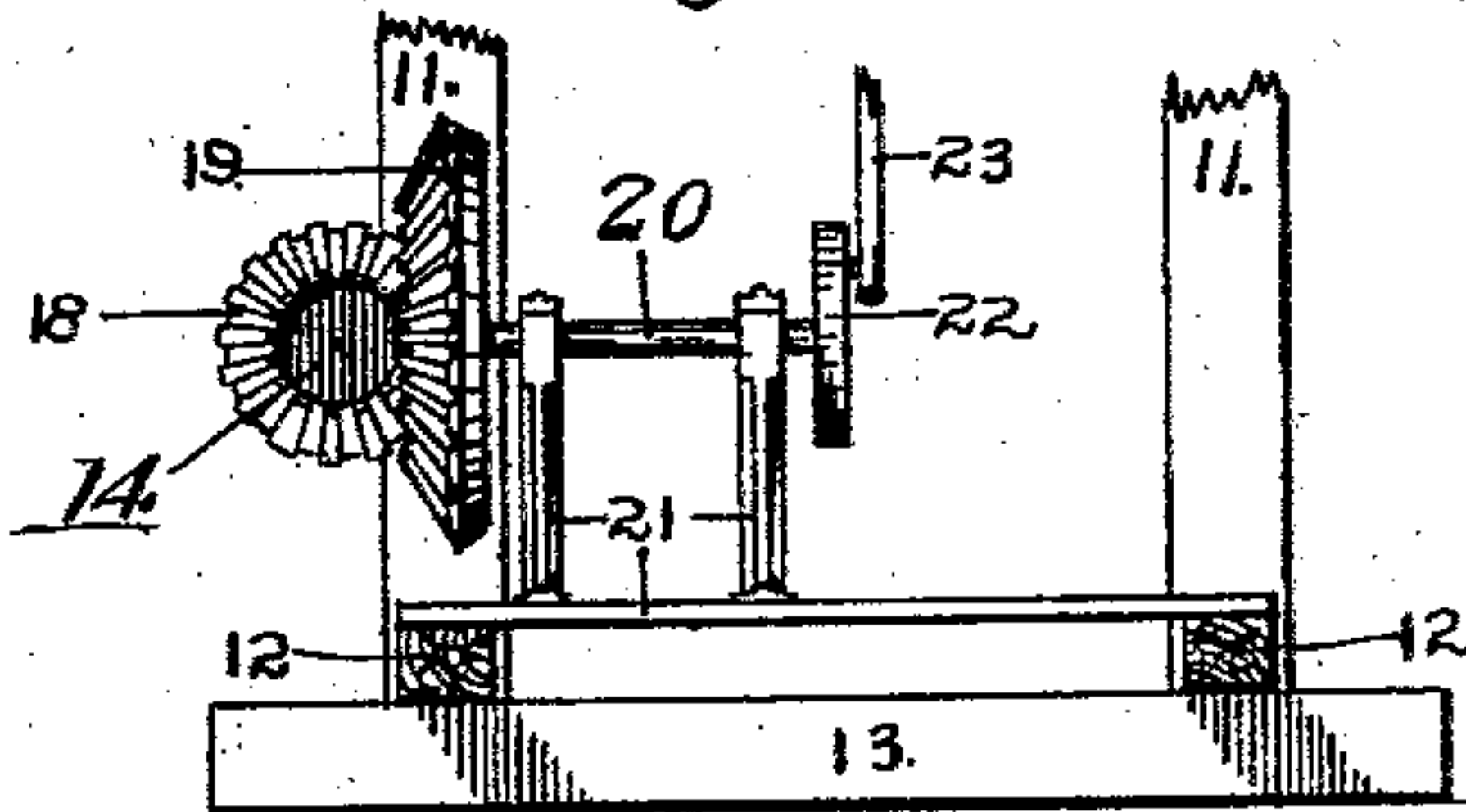


Fig 12.

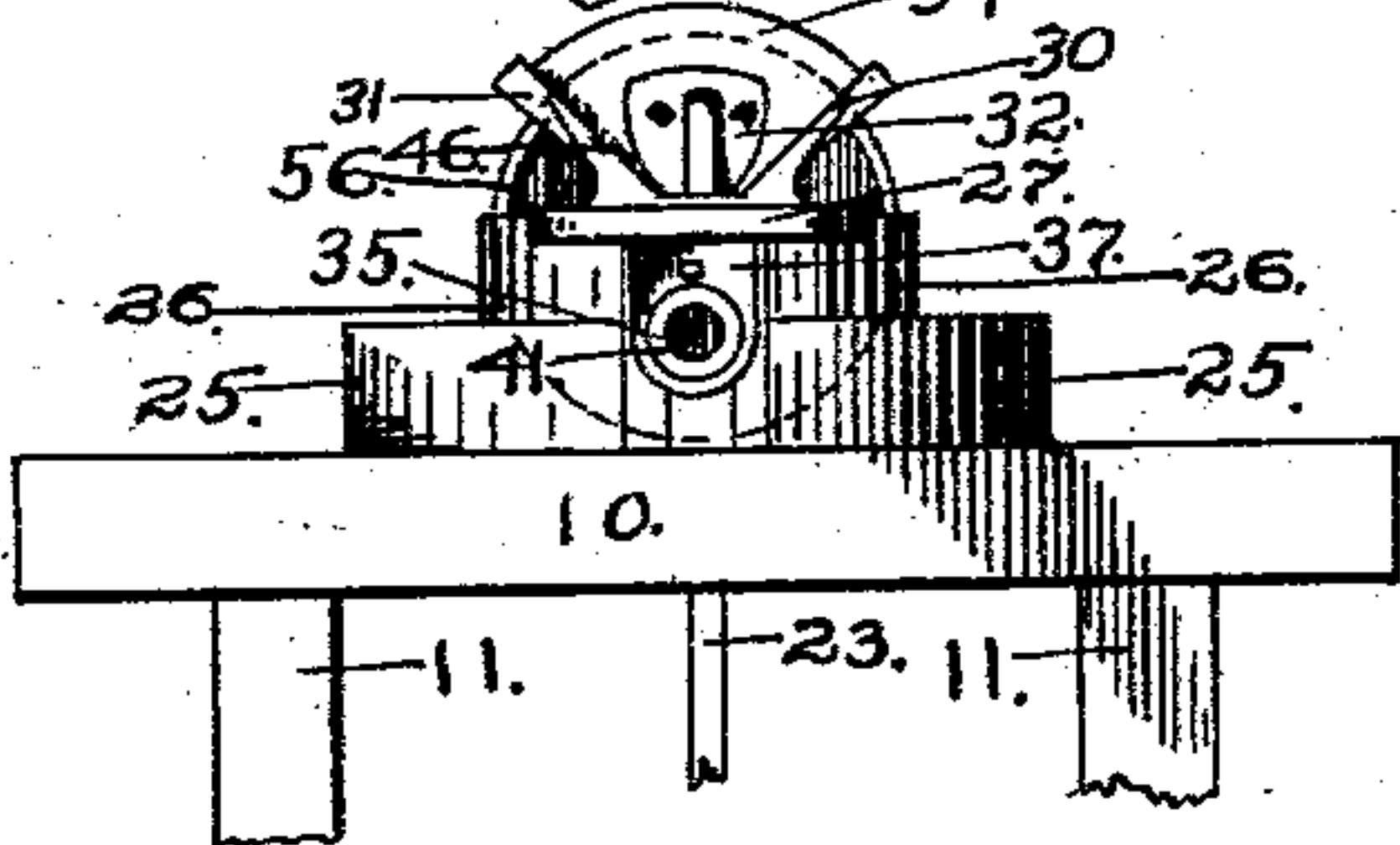


Fig 13

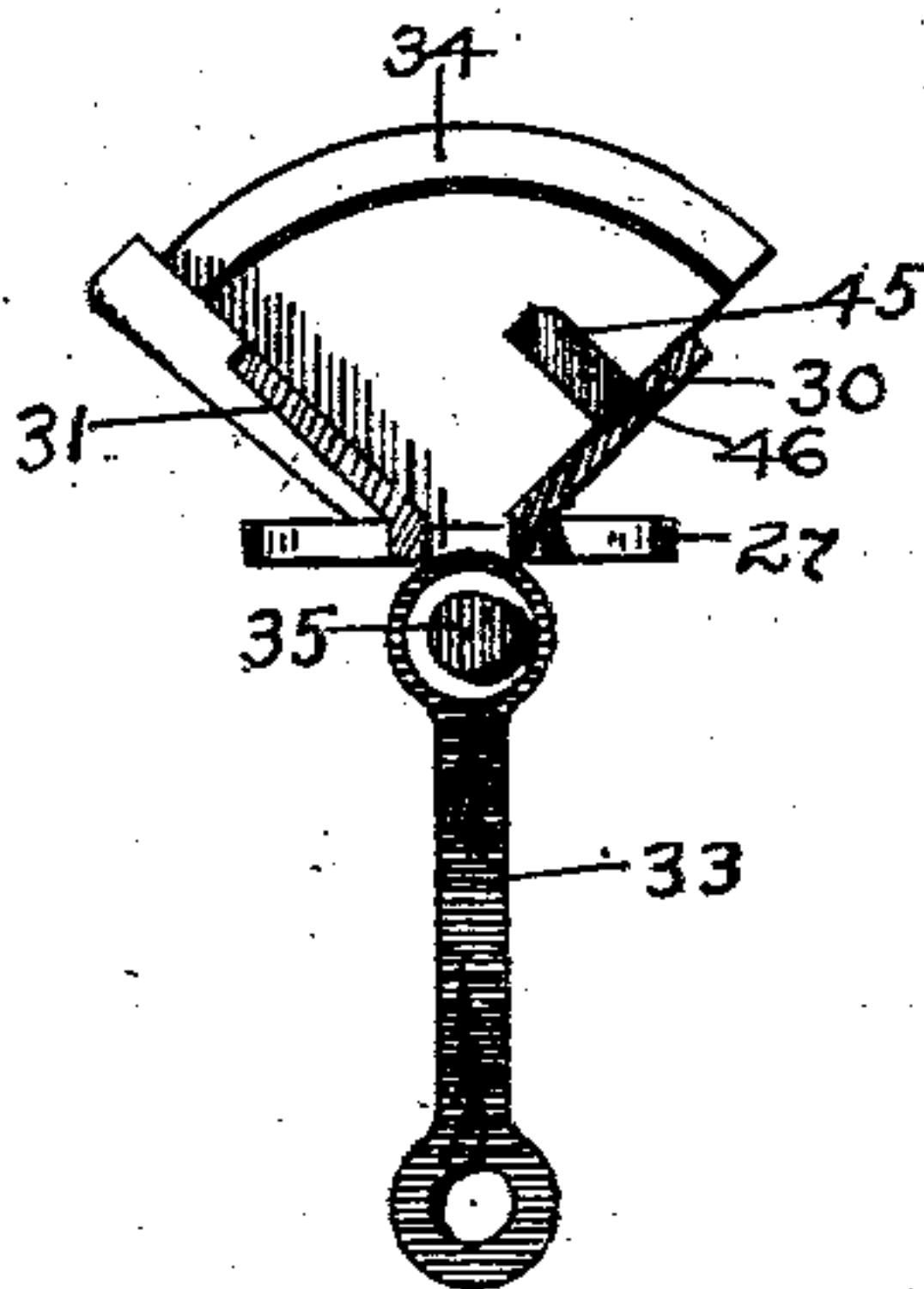
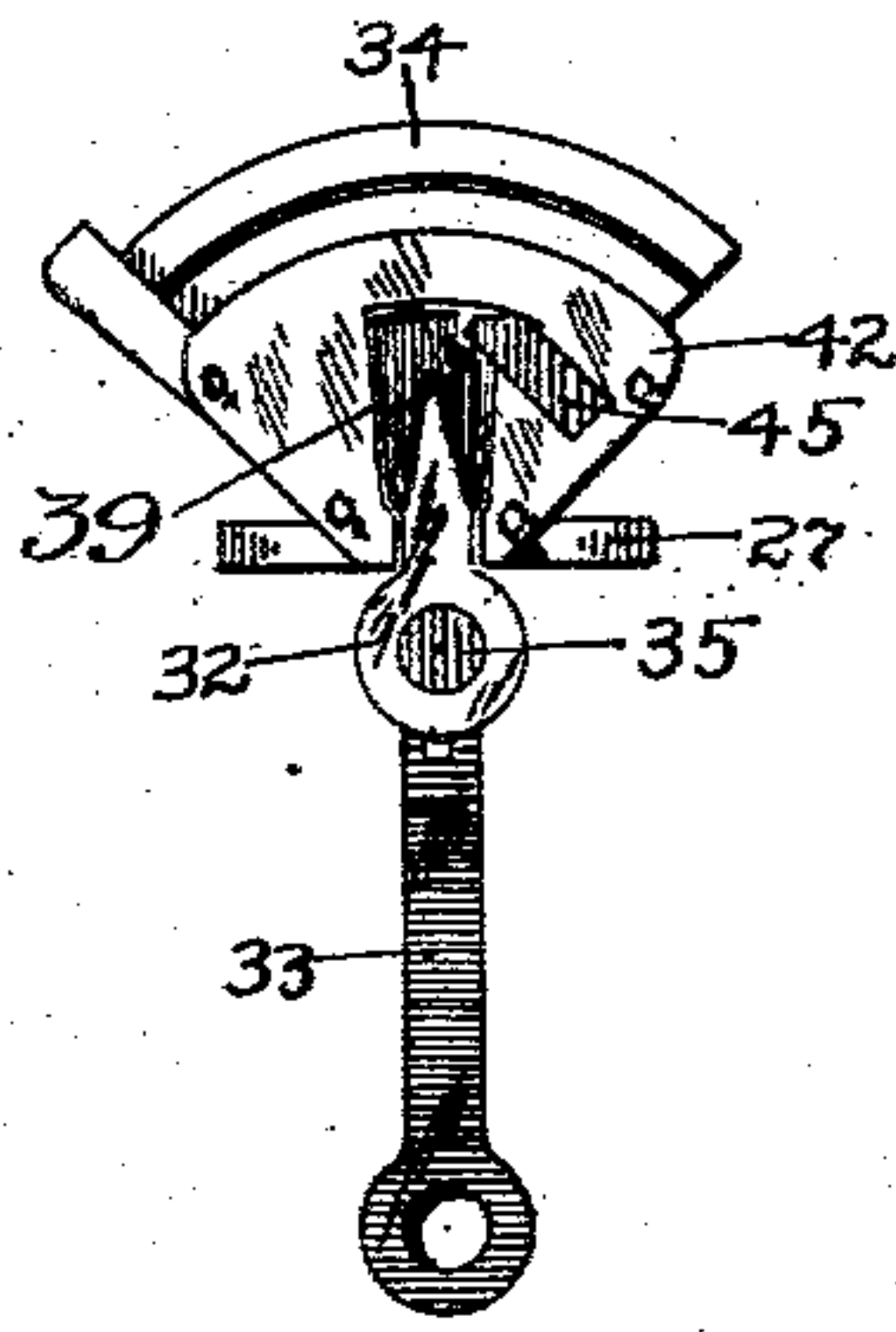


Fig 14.



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# UNITED STATES PATENT OFFICE.

GEORGE F. WISSMAN, OF INDIANAPOLIS, INDIANA.

## HEAD-BLOCK-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 740,727, dated October 6, 1903.

Application filed October 30, 1902. Serial No. 129,501. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE F. WISSMAN, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Head-Block-Sawing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

10 The object of this invention is to provide a machine for the rapid and economical sawing of head-blocks and like pieces of timber in the shape of a quarter-circle. Such blocks are now in common use for making the corners of window and door frames. The machine herein shown not only saws the block out of a larger piece of timber, but also forms the edges thereof rounding and completely finishes the head-block.

20 The nature of this invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is a perspective of the machine. Fig. 2 is a plan view of the block-holder at the left-hand end of the machine. Fig. 3 is a side elevation of the block-holder. Fig. 4 is a central longitudinal vertical section of the two block-holders. Fig. 5 is a central vertical section of one of the saws and attached parts. Fig. 6 is a left end elevation of the saw shown in Fig. 5. Fig. 7 shows details of the bit for forming the rounded edge of the block. Fig. 8 is a bolt for connecting the two bits for each saw. Fig. 9 is a block of wood from which the head-blocks are sawed, the head-blocks to be sawed therefrom shown by dotted lines. Fig. 10 is a cross-section through one head-block to show the form of its edges. Fig. 11 is a section on the line A A of Fig. 1. Fig. 12 is an end elevation of the means for mounting and carrying the block-holders. Fig. 13 is a cross-section of the block-holder on the line B B of Fig. 2. Fig. 14 is an inner end elevation of the block-holder.

45 In detail 10 represents a frame made of timbers placed rectangularly with each other and secured together upon the legs 11, which latter are held in place by the base-blocks 12 and brace-pieces 13. A shaft 14 is mounted in the bearings 15, secured to the legs 11, that

is driven by a pulley 16 and belt 17. The shaft 14 has a bevel-pinion 18, that meshes with the bevel-gear 19, carried on the horizontal shaft 20, that is mounted on the stands 21, supported on the brace-pieces 13. Said shaft 20 carries a crank-wheel 22, with which the connecting-rod 23 is connected and driven. This constitutes the framework and driving mechanism of the machine. On the frame I place at each end two pairs of blocks 25 and 26, somewhat separated from each other to leave an opening between them. Upon these blocks I mount the base 27 of the block-holder by lag-screws through the holes 28. The inner end of said block-holder is formed of two plates 30 and 31 integral with the base 27 and placed at a right angle to each other, as shown in Fig. 13. Between said plates at the lower end there is a longitudinally-extending slot 32, through which an arm 33 extends for carrying the clamping-head 34, which is in the form of a quarter-circle fitting in between the two plates 30 and 31 and reciprocable longitudinally therein.

75 The arm 33 extends down and is secured to the rod 38, which has connected with it the connecting-rod 23, as appears in Fig. 4. In that figure it is seen that as the rod 38 moves backward and forward longitudinally it will reciprocate the arms 33 and clamping-heads 34. A shaft 35 is mounted loosely, so as to be longitudinally movable in the bushing 71 of the arm 33 and in the bearings 36 and 37.

80 A clamping-arm 39 is secured to the inner end of each of the rods 35 and coöperates with the clamping-head 34 for holding the wooden block while it is being sawed. The tension of said clamping-arms is controlled by the springs 40 on the rods 35 between the set-collars 41, and the outward movement of the clamping-arms and rods 35 is limited by the inner set-collar 41. A plate 42 is secured on the ends of the plates 30 and 31 and is cut out centrally, as is shown in Fig. 14, to permit the movement of the clamping-arm 39 and also the block-removing finger 45. This finger is a rectangular piece of iron with one end extending perpendicularly from the plate 30 and the other end reciprocating in the groove 46 in said plate and secured to the clamping-head 34, so as to move with said clamping-



head. There is also an opening 47 in the plate 31, to be seen in Fig. 2, through which the block can fall after it has been sawed out.

Coming now to the saw construction, I  
5 mount a shaft 50 in the bearings 51 on the wooden cross-pieces 52 and braced by the plate 53. A pulley 54 is centrally secured to said shaft for actuating it. At each end of said shaft 50 there is a drum 55, to which a cylinder-  
10 saw 56 is secured by the bolts 57. This saw construction has no lateral movement and the outer ends of the saws surround the inner ends of the block-holders, so that the cylinder-saws will cut the curved portion of the  
15 head-block out of a piece of timber put into the machine. The edges of the curved portion of said blocks are rounded and finished by a pair of bits 60 in each saw that are bolted in place by the bolts 57, extending through  
20 the slots 61, whereby they may be adjusted longitudinally and are held apart by the right and left hand screws at the ends to keep said bits from expanding. A wooden ring 63 is placed within the saw to maintain its true  
25 curvature, it being wedged in tight by the wedge 64. (Shown in Fig. 6.)

The operation of the machine is as follows: The clamping-heads 34 move alternately toward and away from their corresponding  
30 clamping-arms 39. When said two clamps are apart, as shown, for example, in Fig. 2, the block to be sawed, which is rectangular, is placed on the plates 30 and 31 between the clamping-head 34 and the finger 45. The  
35 further operation of the machine moves such clamping-head and the board inward until the board is clamped between the parts 34 and 39. After the wood is thus clamped and it is moved farther inward it comes in  
40 contact with the saw, and the block is sawed while it is thus being moved inward. After the machine reaches its limit of movement the parts are reversed and the sawed block is carried back until the clamping-head 34 reaches  
45 its outward limit of movement, as in Fig. 2, and then the block falls out through the opening 47. As the block at the left-hand end of the machine is being sawed the block at the  
50 right-hand end is dropping out and a new block being put in place, and this process is repeated alternately at each end, so that all that is necessary to do is to feed the machine with blocks to be sawed and it will turn them  
55 out in finished form, both sawing and trimming them at the same time.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine of the class described, the combination with a cylinder-saw, of a pair of  
60 oppositely-placed longitudinally-adjustable bits mounted on the inner surface of said saw for trimming the edge of the material while being cut by the saw.

2. In a machine of the class described, the  
65 combination with a cylinder-saw, of a pair of longitudinally-adjustable bits placed within

the saw near the edge, and a bolt connecting said bits to prevent them from spreading.

3. In a machine of the class described, a cylinder-saw, a ring within said cylinder-saw, 70 and a wedge for spreading said ring and holding the saw in a true curve.

4. A machine of the class described including a cylinder-saw, a stationary block-holder extending into the saw having two side plates 75 extending at a right angle to each other, a slidable clamping-head in said holder, means for moving it toward the saw, and a spring-controlled clamping-arm that coöperates with the clamping-head to hold the block while it 80 is being sawed.

5. A machine of the class described including a cylinder-saw, a stationary block-holder extending into the saw having two side plates 85 at a right angle to each other, one of said plates being provided with an opening through which the block after being sawed may fall, a slidable clamping-head in said holder, means coöperating with the clamping-head for holding the block, and means for 90 moving the clamping-head toward the saw and withdrawing the block after it has been sawed to a position where it will fall through said opening.

6. A machine of the class described including a block-holder consisting of a base-plate 95 and two block-holding plates arranged at a right angle to each other with a longitudinal slot in their vertex, a clamping-head in said holder with an arm extending down to said 100 slot, means for actuating said clamping-head, a clamping-arm extending down through said slot, a rod on which said arm is mounted, and a spring on said rod tending to draw the clamping-arm toward the clamping-head. 105

7. A machine of the class described including a stationary block-holder and two block-holding plates arranged at a right angle to each other, one of said plates having a slot 110 in it for the discharge of the block after it has been sawed, a movable clamping-head in said holder, and a finger connected with said clamping-head and extending therefrom sufficiently far to admit the block to be sawed.

8. A machine of the class described including a pair of oppositely-extending cylinder 115 saws, means for rotating them, and a single means for feeding wooden blocks to said saws alternately.

9. A machine of the class described including a cylinder-saw, a block-holder stationary 120 with reference to said cylinder-saw with a longitudinal slot in it and also a transverse opening for the discharge of the block after being sawed, a movable clamping-head, and a spring- 125 controlled clamping-arm extending up through the slot in the block-holder opposite said clamping-head to coöperate therewith in holding the block while it is being sawed.

10. A machine of the class described including a cylinder-saw, a block-holder stationary 130 with reference to said cylinder-saw with a lon-



5 longitudinal slot in it, a movable clamping-head  
in the block-holder for pushing the blocks  
toward the saw, a finger secured to the clamp-  
ing-head and extending up in front of its face  
10 in position to coöperate with the clamping-  
head in loosely holding the block of wood be-  
fore it reaches the saw, means extending up  
through the longitudinal slot in the block-  
holder for actuating said clamping-head, a  
15 clamping-arm extending up through the slot  
in the block-holder opposite said clamping-  
head to coöperate therewith in holding the  
block while it is being sawed, a spring which  
tends to force said clamping-arm toward said  
20 clamping-head, and a stop to limit the move-  
ment of the clamping-arm toward the clamp-  
ing-head and hold it away from the clamping-  
head when the latter is in position to receive  
the block of wood to be sawed.  
21. A machine of the class described includ-  
ing a pair of oppositely-extending cylinder-

saws, a block-holder for each saw stationary  
with reference thereto with a longitudinal slot  
in each block-holder, a movable clamping-  
head in each block-holder for pushing the 25  
blocks toward the saw, a spring-controlled  
clamping-arm extending up through the slot  
in said block-holder opposite said clamping-  
head to coöperate therewith in holding the  
block while it is being sawed, a reciprocating 30  
rod, and an arm secured to each of said clamp-  
ing-heads and to said rod whereby the recip-  
rocation of the rod will actuate and alternate  
the block-feeding mechanisms for the saws.

In witness whereof I have hereunto affixed 35  
my signature in the presence of the witnesses  
herein named.

GEORGE F. WISSMAN.

Witnesses:

V. H. LOCKWOOD,  
NELLIE ALLEMONG.